

IN THE CLAIMS:

1. (Currently Amended) A method of updating covariance of a signal in a sequential manner comprising the steps of:

scaling ~~a~~ the covariance of ~~the~~ signals by a scaling factor;

updating the scaling factor based on ~~a~~ the signal to be recognized;

updating the scaling factor ~~matrix~~ each time new data of the signal is available; and

calculating a new scaling factor by adding a correction item to a previous scaling factor.

2. (Original) The method of claim 1 wherein the signal comprises a speech signal.

3. (Currently Amended) The method of claim 1 wherein the scaling factor is a scaling matrix ~~and could be any matrix that ensures the scaled matrix is a valid covariance.~~

4. (Currently Amended) The method of claim 1 wherein the new available data of the signals is ~~could be~~ based on any length.

5. (Currently Amended) The method of claim 1 wherein the new available data of the signals is ~~could be~~ a frame.

6. (Currently Amended) The method of claim 1 wherein the new available data of the signals is ~~could be~~ an utterance.

7. (Currently Amended) The method of claim 1 wherein the new available data of the signals is ~~could be~~ a fixed time period.

8. (Currently Amended) The method of claim 1 wherein the new available data is ~~could be~~ every 10 minutes of a speech signal.

9. (Original) The correction of claim 1 wherein the correction is the product of any

sequence whose limit is zero, whose summation is infinity and whose square summation is not infinity and a summation of quantities weighted by a probability.

10. (New) The method of claim 3 wherein the scaling matrix is a diagonal.
11. (New) The method of claim 1 wherein the scaling factor is in exponential form.
12. (New) A method of updating a model for speech recognition, comprising:
 - adjusting a covariance associated with the model by a scaling factor to provide an adjusted variance;
 - updating the scaling factor based on a speech signal to be recognized, wherein the speech signal is to be recognized using the model;
 - updating the scaling factor each time new data of the speech signal is available;
 - calculating a new scaling factor by adding a correction item to a previous scaling factor; and
 - updating the model using the adjusted covariance.